

L 14301-66 EWT(1)/FS(v)-3 SCTB DD/RD

ACC NR: AT6003890

SOURCE CODE: DR/2865/65/004/000/0543/0554

AUTHOR: Gazenko, O. G. (Doctor of biological sciences); Chekhonadskiy, N. A.;
Razumeyev, A. N.; Yegorov, B. B.

62
B+1

ORG: none

TITLE: Elementary ^{2,44}model of the vestibular apparatus

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii,
v. 4, 1965, 543-554

TOPIC TAGS: spacecraft capsule, human sense, audition, acceleration, central
nervous system, neuron, space medicine equipment

ABSTRACT: The vestibular analyzer plays an important role in spatial orientation
and can be schematically divided into two sections; receptors which perceive
the physical factor, and the central section which coordinates receptor in-
formation with various nervous-system formations. The purpose of this in-
vestigation was to develop an elementary model of the vestibular apparatus
in the interest of elucidating some functional features of this organ under con-
ditions of a variable gravitational field.

1. Characteristics of receptors of the otolithic section of the vestibular
apparatus

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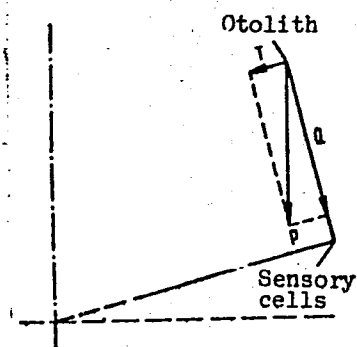


Fig. 1. Principles of a receptor

P - weight of otolith, Q - weight force directed along the afferent fiber, T - force component acting across the afferent fiber.

Figure 1 schematically represents the function of otolithic receptors.

The hypothesis is presented that the receptor reacts to the angle of head inclination relative to the vertical axis when changes in the magnitude of weight component forces of the otolith take place along or across an afferent fiber. The transformers of these changes in magnitude into impulse frequencies are sensory cells. Thus, the receptor will react both to the angle of head inclination and to acceleration forces which take place when the orga-

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ACC NR: AT6003890

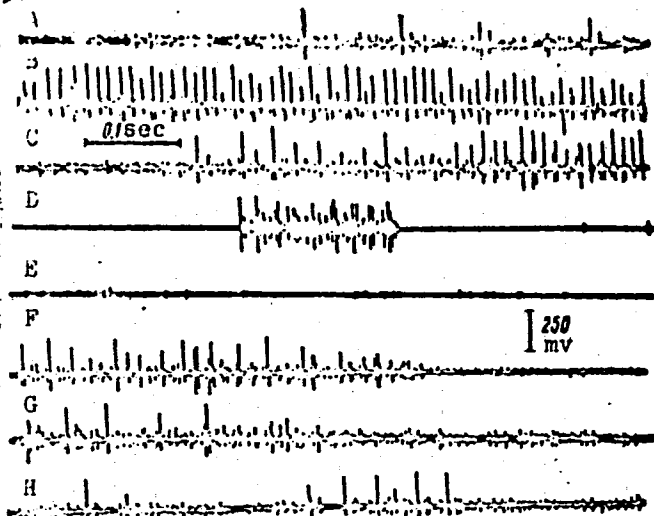


Fig. 2 Change in neuron rhythmicity in the giant cell nucleus of the reticular formation of a cat during 5-G acceleration

A - Original rhythmicity; B - activity for 35 sec of rotation (15-sec sample); C - 75 sec of rotation; D - 90 sec; E - 120-150 sec; F - termination of rotation; G - 20-50 sec later; H - 150 sec later.

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ACC NR: AT6003890

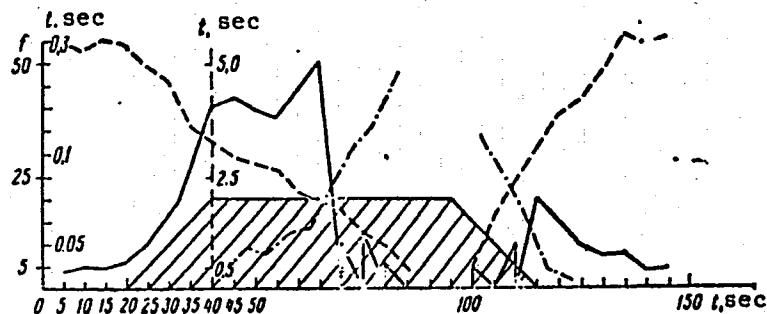


Fig. 3. Averaged results of changes in neuron rhythmicity in the giant cell nucleus of the reticular formation during 5-G acceleration

1 - Acceleration, 2 - impulse frequency, 3 - intervals between impulses, 4 - intervals between groups of impulses.

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ACC NR: AT6003890

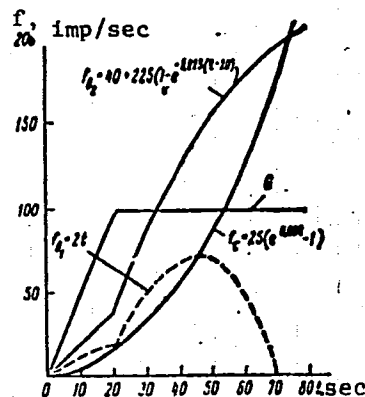


Fig. 4. Graphic representation of processes arising in a neuron during acceleration.

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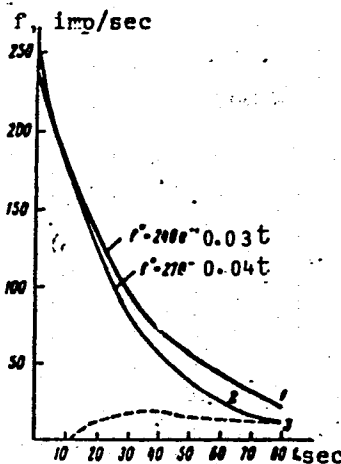


Fig. 5. Graphic representation of processes in separate neurons of the reticular formation after the termination of acceleration:
1 - Impulse frequency in the process of neuron excitation;
2 - impulse frequency in the process of neuron inhibition;
3 - aggregate curve of neuron impulse frequency.

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ACC NR: AT6003890

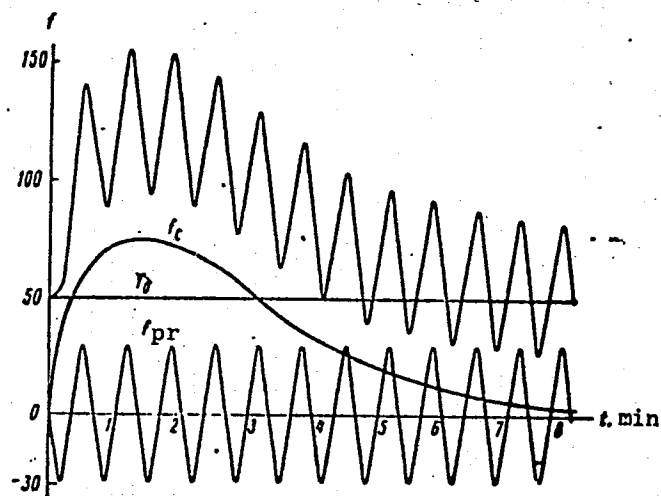


Fig. 6. Dependence of impulse frequencies in the proposed model, a rough analog to a biological system exposed to varying accelerations

f_0 - Stable component, f_{pr} - forced component, f_c - free component.

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J. 14301-66

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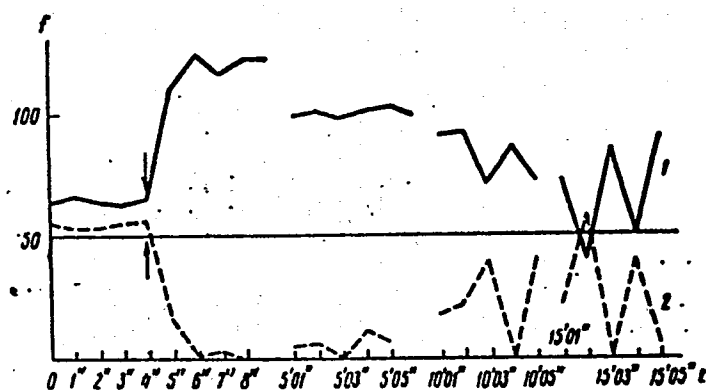


Fig. 7. Changes in the rhythmic activity of neurons during prolonged stimulation of the otolith apparatus

1 - Network no. 1; 2 - network no. 2, Vertical axis - no. of impulses/sec; horizontal axis - time of the effects of periodic force.

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ACC NR: AT6003890

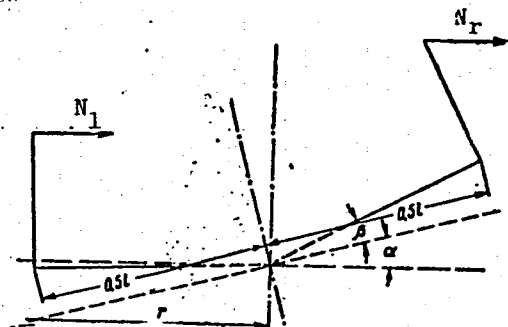


Fig. 8. N_1 , N_r - Centrifugal forces acting on the left and right otolith

r - Turning radius; l - space between left and right otolith.

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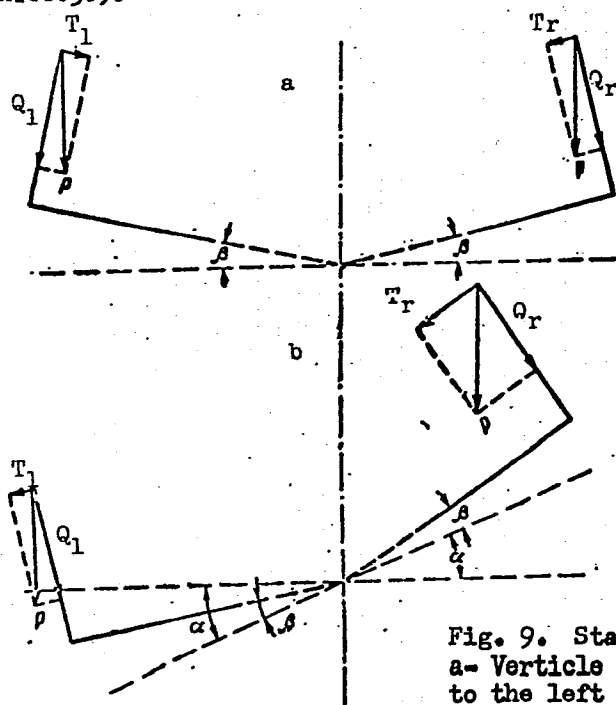


Fig. 9. Static function of the "Summator"
a- Vertical head position; b- head inclined
to the left (angle alpha)

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asm is moving as a function of changes in otolithic weight. It has been shown that the frequency of sensory impulses increases proportionately with acceleration.

2. Reactions of receptor-neuron systems to acceleration gradually changing with time

Some results of an investigation of the rhythmic activity of 100 neurons in the giant cell nucleus of the reticular formation of a cat during 5-G acceleration are given in the following figures, along with graphic representations of neuronal processes which arise under these conditions.

Figures 4 and 5 are mathematical derivations of the experimental results. It can be seen that the aggregate curve of neuron impulse frequency is sufficiently close to the experimental curve shown in figure 3.

3. Reaction of a receptor-neuron system to acceleration periodically changing with time

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The problem of the dynamic nature of "channels" of the otolithic portion of the vestibular analyzer is discussed. It is proposed that a model of a so-called receptor-neuron channel would be a circuit with constant resistance (R), inductance (L), and capacitance (C), successively switched on. The acceleration acting on the organism is likened to the circuit voltage, and the current is analagous to the electrical activity of a receptor-neuron system. Experimental data supported the feasibility of the model shown above.

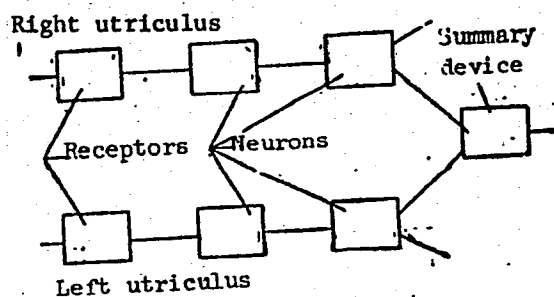


Fig. 10 Principle of the "Summator"

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Figure 7 shows the modeled effects of prolonged otolithic stimulation.

4. Some principles of the so-called "summing device"

A diagrammatic representation of the so-called summing device which compares the coupled signals from the left and right utricle and the sacculus is given in Figs. 8, 9, and 10.

The author states that the summing device, working according to the proposed systems, excellently reflects the features of the movements of birds and animals with removed right and left otoliths.

It is concluded that the proposed principles of modeling the otolithic portion of the vestibular apparatus can be used to explain some general features of this important organ. It is hoped that further development in this field will lead to the creation of a much-needed electronic model for more detailed investigations of vestibular function. Orig. art. has: 10 figures and 3 formulas. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 003

Card 12/12

ACC NR: AT6036526

SOURCE CODE: UR/0000/66/000/000/0111/0112

AUTHOR: Gezalyan, L. S.; Il'in, Ye. A.; Razumayev, A. N.

ORG: nono

TITLE: Bioelectric reactions and oxygen tension in several parts of the brain during hypoxic hypoxia [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966.]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 111-112

TOPIC TAGS: hypoxia, electroencephalography, central nervous system

ABSTRACT: The sequence, functional significance, and physiological mechanisms of phase changes in the EEG's of various parts of the brain during hypoxic hypoxia were studied in rabbits with electrodes implanted in the sensorimotor region of the cortex, the hippocampus, the posterior hypothalamus, and the midbrain reticular formation. The rabbits breathed nitrogen through a mask. Functional state of these centers was evaluated by assimilation of rhythmic light flashes on the EEG. In 6 animals pO_2 in the cortex and reticular formation was polarographically recorded. As hypoxic hypoxia developed,

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ACC NR: AT6036526

the well-known 3 characteristic phases of EEG changes appeared: 1) the arousal reaction phase; 2) the dominant slow wave phase; and 3) the phase of electrical activity extinction. It was found, however, that the phase 2 slow waves alternated with periods of rapid oscillations, and that recurrent slow waves could be observed in the activity extinction phase in addition to periods of bioelectric "silence". During the first (amplitude gain) stage of the slow wave phase EEG's of all studied brain structures showed assimilation of light flash rhythms. Simultaneous decrease in pO_2 shows this to be a persistence reaction masking the development of CNS inhibition. Restoration of the light flash rhythm assimilation following hypoxic hypoxia usually occurred first in the cerebral cortex.

Changes in cerebral cortex and reticular formation EEG's during hypoxic hypoxia were correlated and analyzed by computer, and the results compared with changes in pO_2 in the cortex (59.25 ± 10.25 from initial levels) and reticular formation ($79.75 \pm 3.33\%$ from initial levels). W. A. No. 22;

ATD Report 66-1167

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

GAZENKO, O.G.; CHEKHONADSKIY, N.A.; RAZUMEYEV, A.N.; YEGOROV, B.B.

Elementary model of the vestibular apparatus. Probl. kosm. biol.
4:543-554 '65. (MIRA 18:9)

ACC NR: AT7004920

SOURCE CODE: UR/0000/66/000/000/0003/0007

AUTHOR: Gzenko, O. G. (Moscow); Chekhonadskiy, N. A. (Moscow);
Razumeyev, A. N. (Moscow); Yegorov, B. B. (Moscow)

ORG: none

TITLE: Some principles of information coding inherent to biological systems

SOURCE: Vses. konf. po avtomatich. kontrol i metodam elektrich. izmereniy, 6th, 1964. Avtomatich. kontrol' i metody elektrich. izmereniy; tr. konf., t. I: Teoriya izmerit. info. sistem (Automatic control and electrical measuring techniques; transactions of the conference, v. 1: Theory of measuring information systems). Novosibirsk, Izd-vo Nauka, 1966, 3-7

TOPIC TAGS: neuron, vestibular function, electromagnetic biologic effect,
~~information coding~~ *evaluation*

ABSTRACT: The results are reported of an experimental study of information coding in some regions of the central nervous system of animals whose organism was subjected to overloads. Activity of the neurons of a giant-cell nucleus of reticular formation was studied; in practice, the activity of a chain comprising a receptor and a few series-connected neurons was observed. A cat was rotated in a centrifuge

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which created a 5-times-normal load in his organism. Pulses of 100 neurons were measured before, during, and after the overload. An inference can be drawn that the receptors of the otolith part of the vestibular apparatus generate electrical pulses of 1-2 msec duration, 1-5 mv height, at a frequency from a fraction of cps to 30 cps. With application of an overload, the frequency increases to 120-130 cps, pulse height remaining constant. It is found that: (1) The output of the receptor-neurons chain is a function of two parameters: degree of overload and time; (2) With gravity variation of 1:4000, the output-frequency limit is 150 cps. Orig. art. has: 5 figures and 7 formulas.

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 004

Card 2/2

USSR / Microbiology. Hygienic Microbiology.

F-4

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90849

Author : Segal', M. S.; Razumeyev, P. A.; Ryabchikova, V. P.

Inst : Not given

Title : Homemade Preserves as a Source of Botulism

Orig Pub : V sb.: Anaerobnyye infektsii. Kiyev, Gosmedizdat USSR,
1957, 145-147

Abstract : Three cases of poisoning are described in individuals with clinical symptoms of botulism after having partekane of homemade preserves prepared from pork which had been sealed under antiseptic conditions. The meat was boiled with the seasonings, cut into small pieces, and placed in a jar along with tomatoes, and pork fat was poured over the top. The unsanitary part of the procedure involving the carcass of the pig could have favored its contamination with spores of the botulinus bacillus, and the sealing with

Card 1/2

RAZUMEYEV, P.A.

Device for hoisting barrels on to scales. [Suggested by P.A. Razumeev].
Proizv. smaz. mat. no.1:56-58 '56. (MIRA 10:11)

1. Leningradskiy neftemaslozavod imeni Shaumyana.
(Hoisting machinery)

RAZUMEYEV, V., inzh. po tekhnike bezopasnosti (Bryanskaya oblast');
ZABLOTSKIY, R.

Picture display on industrial safety. Okh. truda i sots. strakh.
no.6:40-41 Je '59. (MIRA 12:10)

1.Starodubskiy ovoshchesushil'nyy kombinat Bryanskogo sovnarkhoza (for Razumeyev). 2.Glavnyy inzhener Starodubskogo ovoshchesushil'nogo kombinata Bryanskogo sovnarkhoza (for Zablotskiy).
(Bryansk Province--Industrial safety)

Name : RAZUMEYEV, V.

Remarks : According to an article entitled "Artificial Satellites", V. Razumeyev is the coauthor, with Yu. Krylov, of a popular-scientific brochure entitled "Second Moon" (Moskva, 1957), which sets forth "the scientific and technical basis for the construction of an artificial satellite."

Source : P: Nauka i Zhizn', No. 1, January 1958, p. 76

RAZUMEYEV, V.F.

444. Alfutov, N. A., and Razumeyev, V. F., Dynamic stability of a conical shell supported at one end, loaded by axially symmetrical pressure (in Russian), Izv. Akad. Nauk SSSR, Otd. tekhn. Nauk 10, 161-165, 1955; Ref. Zh. Mekh. 1956, Ref. 3396.

An investigation of the parametric oscillations of a circular conical shell supported at one end and loaded with uniform transverse pressure.

It is assumed that with this attachment the mean surface is deformed without elongation or shearing. From this the kinetic energy of the system, the internal potential energy, and the potential of the external forces are determined. The Lagrange equation which describes the dynamic process, after certain transformations, is reduced to a familiar differential equation of the Mathieu type. The boundaries of the first and second critical regions of dynamic instability are indicated. For envelopes having a capacity of $2\alpha = 12^\circ$, $2\alpha = 15^\circ$ at a pressure of $P \neq 0$ the theoretical results are compared with those of the experiment. The extent of applicability of the solution is not explained. In view of the assumption of the nonelongation of the mean surface in the general case, i.e. at $P \neq 0$, the solution is correct only for long shells.

Courtesy Referativnyi Zhurnal A. V. Sachenko, USSR
Translation, courtesy Ministry of Supply, England

PHASE I BOOK EXPLOITATION

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Krylov, Yuriy Vyacheslavovich, Razumeyev, Vladimir Fedorovich.

. Vtoraya luna (The Second Moon) Moscow, Molodaya gvardiya, 1957.
46 p. 50,000 copies printed.

Ed.: Metantseva, M.; Tech. Ed.: Shuvalov, I.

PURPOSE: This Booklet was written to arouse public interest and pride in the sputniks.

COVERAGE: The booklet discusses what sputnik projects exist at the present time, how the sputniks will be orbited, and what scientific information can be furnished by the instruments they carry. The 15 figures show: the structure of the atmosphere and temperature variations with altitude (fig.1); results of photographic surveys of the earth's surface obtained by high-altitude rocket (fig.2); a "V-2" rocket on its launching platform (fig.3); a "Bumper" rocket in flight, with the first-stage motor working (fig.4); ~~the~~ orbits of the Moon and of an artificial satellite (fig.5);

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The Second Moon (Cont.)

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the power-plant layout of a long-range rocket (fig.6); a longitudinal section of a long-range rocket (fig.7); the flight trajectory of a long-range rocket (fig.8); the configuration of a 2-stage rocket (fig.9); the configuration of a 3-stage rocket for launching satellites (fig.10); the take-off of a satellite-carrying rocket (fig.11); transmitting devices used in investigation of the upper layers of the atmosphere (figs. 12 and 13); a rocket-control board (fig.14); a diagram showing a sputnik being used for television transmission (fig.15); and finally, the booklet gives a little data on projects connected with the International Geophysical Year.

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AVAILABLE: Library of Congress	MLM/lrb
Card 2/2	

KRYLOV, YU., RAZUMYER, V.,

"Engineering in the Sixth Five-Year Plan," (Series) Ytoraya Luna
(Second Moon), Molodaya Gvardiya Publishing House of the Central Committee
of the Young Communist Youth League, 1961.

ALFUTOV, N.A. (Moskva); RAZUMBYEV, V.F. (Moskva)

Dynamic stability of a conical shell supported by one edge and
subjected to axisymmetrical pressure. Izv. AN SSSR. Otd. tekhn.
nauk no. 10: 161-165 0'55. (MLRA 9:1)
(Stability) (Elastic plates and shells)

RAZUMEYEV, V.F., kandidat tekhnicheskikh nauk.

Dynamic stability of flight control linkages on automatic-pilot
airplanes. [Trudy] MVTU no.32:134-142 '55. (MIRA 9:8)
(Airplanes--Rigging) (Automatic pilot (Airplanes))

RAZUMEYEV, V.F., kand.tekhn.nauk, dotsent; PROTASOV, V.D., inzh.; ANISIMOV,
n.D., inzh.

Strength characteristics of circular pipes made of pertinax. Izv.
vys. ucheb. zav.; mashinostr. no. 3:40-45 '61. (MIRA 14:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Pipe, Plastic)

RAZUMAYEVA, V.I. [translator]; BRAYNIN, Ye.I. [translator]; YANISHEVSKIY,
V.M., inzh., red.; SOKOL'SKIY, I.F., red.izd-va; GOL'BERG, T.M.,
tekhn.red.

[Glass in construction] Steklo v stroitel'stve; sbornik statei.
Pod red. V.M. Yanishevskogo. Moskva, Gos.izd-vo lit-ry po stroit.,
arkhit. i stroit.materialam, 1961. 175 p. Translated from the
Czech. (MIRA 14:6)

(Glass construction)

RAZUMEYEV, YU

Topic:
... ..

Soviet source: M: IZ VIM. - 7 May 40, Moscow. Abstracted in IZ, "Treasure Island"
on file in Library of Congress. Air Information Division.
Report No. 27-11.

RAZUMEYEV, A.N. [Razumieiev, O.M.]

Effect of hexenal and ether on the accomodation of the cerebral cortex
and some parts of the brain stem to the rhythm of light stimuli.
Fiziol. zhur. [Ukr.] 6 no.3:303-310 My-Je '60. (MIRA 13:7)

1. Voyenno-meditinskaya akademiya im. S.M.Kirova, kafedra farma-
kologii, farmatsii i farmakognozii.

(HEXOBARBITAL)

(ETHER (ANESTHETIC))

(BRAIN)

SEMENOV, N.K.; RAZUMEYEV, A.N.

Electrophysiological analysis of the pathogenesis in tetanus
intoxication. Zhur. mikrobiol. epid. i immun. 32 no.5:100-105 My
'61. (MIRA 14:6)

1. Iz Voenno-meditsinskoy ordena Lenina akademii imeni Kirova.
(ELECTROENCEPHALOGRAPHY) (TETANUS)

MAISONTEV, Yu., Engineer

Wrote about the machine bldg. plant "Krasnaya Presnya", Moscow, Moskovskaya o., RSFSR concerning the production of molding equipment and construction machinery and noted the shortage of molding machines.

Soviet Source: N: Izvestiya; 14 Apr. '46, Moscow

Abstracted in USAF "Treasure Island", on file in Library of Congress, Air Information Division, Report No. 97606

RAZUMEYEV, YU

RAZUMEYEV, YU. In: "Treasure Island", on File in Library of Congress,
Air Information Division, Report No. 86689, 86690

Soviet Source: N: Izvestiya, 7 May 1946, Moscow
Abstracted in "Treasure Island", on File in Library of Congress,
Air Information Division, Report No. 86689, 86690

RAZIMOVYI, YU.

Wrote about -GLAVOLYMOBPAI, (GLAVNOYE UPRAVLENIYE SVYAZNOY SPOKOYNO PNTI--
Main Administration of Northern Sea Route) Automatic radioneteological station

SOVIET SOURCE: Izvestiya, 7 May 1946 - Moscow
ABSTRACTED IN "THE PEASANT ISLAND", ON FILE IN LIBRARY OF CONGRESS, AIR INFOR-
MATION DIVISION, REPORT NO. 8721L . UNCLASSIFIED

RAZUMEYEV, Yu.

note about the exhibition of ... at Gosudarstvennyy Tekhnicheskii Muzei
(State Polytechnical Museum), 24 Kitarovskiy Prospekt, Moscow. Moskva, 1984.

Soviet source: N. I. ... Moscow, 7 May 84. Abstracted in ... 'Treasure Island',
in ... of Congress, Air Information Division, Report No. 87912,
Unclassified.

RAZUMEYEVA, A.I.

Potentials for an increase in labor productivity in swine farming
on the collective farms of the Maritime Territory. Soob.DVFAN
SSSR no. 15:101-104 '62. (MIRA 17:9)

1. Dal'nevostochnyy filial imeni Kozarova Sibirskogo otdeleniya
AN SSSR.

RAZUMEYKO, N.G.; AVSYUK, G.A., otv.red.; OGANOVSKIY, P.N., red.

[Franz Josef Land; snow and ice temperature] Zemlia Frantsa-Iosifa;
temperatura snega i l'da. Moskva. (Materialy gliatsiologicheskikh
issledovaniy). No.1. [Station observations on Churlyanis Cupola]
Statsionarnye issledovaniia na kupole Churlianisa. 1960. 175 p.
(MIRA 14:3)

1. Akademiya nauk SSSR. Institut geografii.
(Franz Josef Land--Glaciers)

MEL'NIK, Yu.M.; RAZUMEYEVA, N.N.

Mineralogy of the pyrophyllite schists of Zbranok. Min. sbor. no.17:
162-169 '63. (MIRA 17:11)

1. Gosudarstvennyy universitet imeni Franko, L'vov.

KRENKE, A.N.; RAZUMEYKO, N.G.

Ice domes of Franz Josef Land. Priroda 50 no.4:94-96 Ap '61.
(MIRA 14:4)

(Franz Josef Land---Ice)

RAZUMIKHIN, B. S.

SUBJECT USSR/MATHEMATICS/Differential equations

CARD 1/1 PG - 1/1

AUTHOR RAZUMIKHIN B.S.

TITLE On the stability of the trivial solution of a system of second order.

PERIODICAL Priklad. Mat. Mech. 19, 279-286 (1955)
reviewed 7/1956

By aid of the direct Liapunov method the author investigates the stability of the trivial solution of non-linear systems of second order which can be brought to one of the following forms or similar ones:

$$\begin{cases} \dot{x} = p_1(x,y)x + p_2(x,y)y \\ \dot{y} = x \end{cases} \quad \begin{cases} \dot{x} = p_1(x,y)x + p_2(x,y)y \\ y = \dot{x} \pm y \end{cases}$$

As Liapunov function a positive definite quadratic form

$$V = \alpha x^2 + 2\beta xy + \gamma y^2$$

is used. The regions of stability result from the postulate that $\frac{dV}{dt}$ is negative definite or semi-definite, and they are bounded by certain parabolas which can be constructed easily. The method is applicable only under certain restrictions on the coefficients p_i ; in the first case e.g. $p_1(x,y)$ and $p_2(x,y)$ must be

bounded and negative for all values x,y .

INSTITUTION: Moscow.

RAZUMIKHIN, B.S. (Moskva)

Stability of automatic control systems with one control unit.
Avtom.i telem. 17 no.11:958-968 N '56. (MLBA 9:12)
(Automatic control)

CARD 1/3

RAZUMIKHIN, B.S.

SUBJECT
AUTHOR
TITLE
Periodical

USSR/MATHEMATICS/Differential equations
RAZUMIKHIN B.S.
On the stability of the systems with retardation.
Priklad. Mat. Mech. 20, 500-512 (1956)
reviewed 11/1956

The author investigates the asymptotic stability of the trivial solution of the system

$$\frac{dx_i}{dt} = X_i(t, x_j(t), x_{jk}(t-\tau)) \quad i=1, \dots, n,$$

(1)

where X_i is a continuous functional which is bounded in the region $t \geq t_0$, $|x_j| \leq H = \text{const}$, which depends on the time, the coordinates and on the m functions $x_{jk}(t-\tau)$ and which vanishes for $x_j(t) = 0$, $x_{ij}(t-\tau) = 0$. Here X depends on the values of the functions $x_{jk}(t-\tau)$ on the interval $0 \leq \tau \leq h_{ij}(t) \leq h$, h - positive constant.

The extension of the direct Liapunov method to the stability examination of the systems with retardation was given by Krasovski (Priklad. Mat. Mech. 20, 315-327 (1956)) who therefore has introduced the notion of the positive definite functional. The effective construction of the functionals with the properties of Liapunov functions involves great difficulties until now. Therefore the author investigates the question how far the stability examination

Priklad. Mat. Mech. 20, 500-512 (1956)

CARD 2/3

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of (1) can be made by aid of ordinary Liapunov functions. Since the latter obviously represent special cases of a definite functional, the theorems of Krasovski can be applied. But it proves that there are extraordinary hard sufficient conditions, e.g. there exists no Liapunov function which, for an equation of first order, can be used in the case of an oscillating asymptotic stability. Therefore the practical importance of the investigation will be insignificant. Nevertheless it seems to be interesting that at least theoretical the Liapunov criterion becomes more and more the most universal method for the stability examination. The author formulates and proves several criteria of stability, e.g. If there exists a positive definite function $V(t; x_1, \dots, x_n)$ the derivative of which

$$\frac{dV}{dt} = \sum_{i=1}^n \frac{\partial V}{\partial x_i} \cdot \frac{dx_i}{dt} + \frac{\partial V}{\partial t} = \sum_{i=1}^n \frac{\partial V}{\partial x_i} x_i + \frac{\partial V}{\partial t} = U(t; x_j(t), x_{jk}(t-\tau))$$

has the property that the functional $U(\zeta, y_j(\zeta), y_{jk}(\zeta-\tau))$ along every curve L is negative or identical equal zero, then the trivial solution of (1) is stable. Here L is a curve $y_1(\zeta), \dots, y_n(\zeta)$ which for $t > t_0$ satisfies the conditions

RAZUMICHIN, B.S.

SUBJECT USSR/MATHEMATICS/Differential equations
 AUTHOR RAZUMICHIN B.S.
 TITLE On the stability of nonsteady motions.
 PERIODICAL Priklad. Mat. Mech. 20, 266-270 (1956)
 reviewed 11/1956

CARD 1/1

PG - 393

Let the system

$$\frac{dx_i}{dt} = \sum_{j=1}^n p_{ij}(t) x_j \quad (i=1, \dots, n)$$

be given. Let the coefficients $p_{ij}(t)$ be bounded together with their first derivatives. The system with constant coefficients

$$\frac{dx_i}{dt} = \sum_{j=1}^n p_{ij}(\lambda) x_j \quad (i=1, \dots, n)$$

is assumed to satisfy the conditions of the asymptotic stability for all positive values of the parameter λ . The roots of the equation $\det_n \|p_{ij}(\lambda) - \delta_{ij}\lambda\| = 0$ satisfy the condition $\operatorname{Re} \lambda_i(\lambda) < -\delta < 0$, where

is an arbitrarily small fixed positive number.

By a generalization of Četajev's method (Priklad. Mat. Mech. 9, 3, (1945); ibid. 12, 1, (1948)) sufficient stability conditions for the trivial solution are established by aid of Liapunov's direct method.

INSTITUTION: Moscow.

PA - 2216

AUTHOR
TITLE

PERIODICAL

ABSTRACT

^K
RAZUMICHIN, B.S.

Evaluations of the System of Differential Equations of a Disturbing Motion with variable Coefficients (Russian).
Prikladnaia Matematika i Mekhanika, 1957, Vol 21, Nr 1, pp 119-120 (U.S.S.R.)

Received 3/1957

Reviewed 4/1957

Here the system of the equations $(dx_i/dt) = \sum_{j=1}^n p_{ij}(t)x_j$ with $i = 1, \dots, n$ of a disturbing motion is investigated. Here $V(t, x_1, \dots, x_n) = \sum_{i,j=1}^n a_{ij}(t)x_i x_j$ ($a_{ij} = a_{ji}$) denotes a positively definite quadratic form which proves to be a LJAPUNOV function for the system of differential equations mentioned above. Derivation of the function V becomes quadratic and has a definite sign because of the aforementioned system of equations: $U(t, x_1, \dots, x_n) = dV/dt = \sum_{i,j=1}^n a_{ij}(t)x_i x_j$ ($a_{ij} = a_{ji}$). N.G. CETAEV, Prikl. Mat. i Mekh., 15, 1951, suggested the following evaluation for the function V : $V_0 \exp \int_t^{\infty} \lambda_1(t) dt \leq V \leq V_0 \exp \int_t^{\infty} \lambda_2(t) dt$. Here $\lambda_1(t)$ and $\lambda_2(t)$ denote the smallest and largest root respectively of the equation $\det \| a_{ij}(t) - \lambda \alpha_{ij}(t) \| = 0$. With the help of the aforementioned evaluation it is possible to obtain an evaluation for the disturbances of the coordinates. Actually, the quadratic form V can be reduced to the following canonic form by unreal linear transformation: $V = \sum_{i=1}^n h_i y_i^2$. By insertion the following evaluation is then obtained: $V_0 \exp \int_t^{\infty} \lambda_1(t) dt \leq \sum_{i=1}^n h_i y_i^2 \leq V_0 \exp \int_t^{\infty} \lambda_2(t) dt$. If the transformation of V into the canonic form is orthogonal, the

Card 1/2

BUROVA, L.L.; ZHOKHOVSKIY, M.K.; ZOLOTYKH, Ye.V.; RAZUMIKHIN, V.N.

Thermodynamic scale of high pressures up to 25,000 kgf/cm².
Trudy inst.Kom.stand.mer i izm.prib. no.75:60-68 '64.

(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.

BOREUNOV, V.I.; RAZUMIKHIN, V.N.

Unit for measuring the density of liquids at pressures up to
10,000 kgf/cm². by the hydrostatic method. Izdy Inst. Koz. Stan-
mer i izm. prib. no. 75:134-142 '64.

(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.

RAZUMIKHIN, V.N.; BORZUNOV, V.A.

High-pressure piston manometers. Trudy inst. Kom. stand.,
meri izm. prib. no. 46:55-61 '60. (MIRA 13:12)
(Manometer)

RAZUMIKHIN, V.N.

Hydrostatic method for determining the density of liquids at
pressures up to 5,000 kg./cm². Trudy inst. Kom. stand., ser 1
izm. prib. no. 46:96-106 '60. (MIRA 13:12)
(High pressure research) (Densitometers)

KIVILIS, S.S.; RAZUMIKHIN, V.N., kand.tekhn.nauk, red.; ROZOVA, L.V.,
red.izd-va; MATVEYEVA, A.Ye., tekhn.red.

[Measuring the density of liquids and solids] Tekhnika izmereniia
plotnosti zhidkosti i tverdykh tel. Moskva, Gos.izd-vo standartov
"Standartgiz," 1959. 191 p. (MIRA 12:8)
(Liquids--Density--Measurement)
(Solids--Density--Measurement)

R. 22.11.15.10.0.0.00

Category: USSR/Fitting Out of Laboratories. Instruments, Their Theory, H.
Construction and Use.

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 31143

Author : Razumikhin V. N.

Inst : not given

Title : Determination of Density of a Liquid at High Pressures.

Orig Pub: Izmerit. tekhnika, 1956, No 4, 28-31

Abstract: A hydrostatic method is proposed for determination of the density of a liquid at high pressures, which is based on measurement of hydrostatic lifting force by means of a balance. An instrument is described which permits to measure the density by absolute and by relative methods. Mean quadratic error of 0.06% at pressures up to 4000 kg/cm². Maximum pressure at which the method is applicable is limited by viscosity (up to 200 poise, inclusive).

Card : 1/1

-8-

RAZUMIKHIN, V.N.

Dissertation: "A Hydrostatic Method of Measuring the Density of a Liquid Under High Pressures." Can Tech Sci, All-Union Sci Res Inst of Metrology, Leningrad, 1953. (Referativnyy Zhurkin, Khimiya, Moscow, No. 16, Aug 54)

SO: SUM 393, 23 Feb 1955

RAZUMIKHIN, V.N.

Measuring the density of liquids subjected to high pressures.

Izm.tekh. no.4:28-31 J1-Ag '56.

(MLRA 9:11)

(Measuring instruments) (Compressibility) (Liquids--Density)

ZHORNHOVSKIY, M.E.; RAZUMIKHIN, V.N.

Mercury melting curves in the ranges up to 20,000 kg. in sec. per
cm² used for plotting scales in measuring high pressures. Izv. tekh.
no. 6:43-47 J1-Ag '57. (MLRA 10:8)
(Mercury) (Manometer)

GOLDENBERG, A.D.

Method for adrenaline electrophoresis. Vop. kur., fizioter. i lech.
fiz. kul't. 26 no.1:54-57 '61. (MIRA 14:5)

1. Iz bal'neo-fizioterapevticheskogo otdeleniya (zav. - dotsent A.D.
Goldenberg) i bol'nitsy imeni V.I.Lenina (glavnyy vrach-zasluzhennyy
vrach RSFSR V.S.Razumikhin).
(ADRENALINE) (ELECTROPHORESIS)

NOVIKOVA, A.P.; YEMEL'YANOVA, N.N.

Gendon in hypertension. Sov. med. 24 no.4:121-126 Ap '60.

(MIRA 13:2)

1. Iz tret'yey terapevticheskoy kafedry (zav. - prof. B.V. Il'inskiy)
Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey
im. S.M. Kirova i iz ob'yedineniya bol'nitsy im. Lenina (glavnyy
vrach V.S. Razumikhin).
(RAUWOLFIA) (HYPERTENSION)

GORSHKOV, V.A., (Leningrad, Zoologicheskiy per., d.3, kv.10)

Comparative evaluation of methods of reduction of bone fragments
in closed fractures of the surgical neck of the humerus [with summary
in English]. Vest.khir. 80 no.6:21-25 Je '58 (MIRA 11:7)

1. Iz 2-y khirurgicheskoy kliniki (zav. - prof. G.A. Gomzyakov)
Leningradskogo instituta usovershenstvovaniya vrachey im. S.M. Kirova
i bol'nitsy im. V.I. Lenina (glavnyy vrach - V.S. Razumikhin).
(HUMERUS, fract.

neck, reduction of fragments, methods (Rus))

MERINA, V.M., kand.med.nauk; VOIKOVA, L.M.

Diagnostic significance of diastasuria in acute pancreatitis [with summary in English, p.158]. Vest.khir. 79 no.7:36-42 J1 '57.
(MIRA 10:10)

1. Iz 2-y kafedry khirurgii (sav. - prof. G.A.Gomsyakov) Lenin-gradskogo gosudarstvennogo instituta usovershenstvovaniya vrachey imeni S.M.Kirova i khirurgicheskogo otdeleniya bol'nitsy im. Lenina (glavnyy vrach - Y.S.Bagunikhin).

(AMYLASES, in urine

diastase in acute pancreatitis (Rus))

(PANCREATITIS, urine in,

diastase (Rus))

RASKIN, A. M.

Adrenocorticotrophic hormone in certain internal diseases.
Sov. med. 20 no.4:34-38 Ap '56. (MLRA 9:8)

1. Iz terapevticheskikh otdelenii bol'nitsy imeni Lenina
(glavnyy vrach V. S. Razumikhin) i 2-y kafedry vnutrennykh
bolesney (ispolnyayushchiy obyazannosti zaveduyushchiy
dotsent G. R. Britanishskiy) Leningradskogo instituta
usovershenstvovaniya vrachey imeni S. M. Kirova.
(ACTH, therapeutic use,
internal dis. (Rus))

Razumikhin V.S.
RASKIN, A.M. (Leningrad)

Restoration of compensation of carbohydrate metabolism in
diabetes mellitus. Probl.endok. i gorm. 1 no.6:93-94
N-D '55. (MIRA 12:8)

1. Iz endokrinologicheskogo kabineta i terapevticheskogo
otdeleniya Ob"yedinennoy bol'nitsy imeni Lenina (glavnyy vrach
V.S.Razumikhin) i 2-y kafedry vnutrennikh bolezney (i. o. zav. -
detsent G.H.Britanishskiy) Leningradskogo instituta usovershen-
stvovaniya vrachey imeni S.M.Kirova.

(DIABETES MELLITUS, metabolism in,
carbohydrates, restoration of compensation)
(CARBOHYDRATES, metabolism,
in diabetes mellitus, restoration of compen-
sation)

RAZUMIKHINA, K.V.

Measuring turbidity by means of the settling of sediments
in tubes. Trudy GGI no.111:131-142 '64. (MIRA 17:6)

RAZUMIKHINA, K.V.

Comparing the results of granulometric analysis of sediments in their natural state of aggregation and in case of destroyed aggregates. Trudy GGI no.86:24-34 '60. (MIRA 14:4)

(Sedimentation and deposition)

RAZUMIKHINA, N.P.

Meningeoma of the optic nerve. Vest.oft. 34 no.2:27-30 Mr-Apr '55.

1. Iz kliniki glaznykh bolezney (dir. prof. I.A.Dymshits) I Lenin-gradskogo meditsinskogo instituta imeni akad. I.P.Pavlova.

(NERVES, OPTIC, neoplasms,
meningioma)

(MENINGIOMA,
nerve, optic)

(S) H. I. , P. V.

Experimental data on the distribution of heavy minerals in estuarine
alluvium. West. JAU 14 no. 12:101-102 '57. (HIZ: 12:7)
(Mineralogy) (Alluvium)

RAZUMKHINA, K.V.; KARAUSHEV, A.V.

Using a photometer to determine the silt load of water. Trudy
GGI no.100:40-53 '63. (MIRA 16:9)
(Silt) (Photometers)

AUTHORS: Razumikhina, N. G., Aleksandrova, Ye. M. SOV 156-58-3-14/50

TITLE: The Adsorption of Polystyrene Latex on Cotton Tissue (Sorbtsiya polistirol'nykh lateksov na khlopchatobumazhnoy tkani)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 460-464 (USSR)

ABSTRACT: The adsorption is regarded as heterocoagulation, i.e. coagulation of the particles on the adsorbant. The adsorption of three types of positively charged latex (polystyrene latex VA, polystyrene latex OOPKh and polymetacryl latex OOPKh) and of two types of negatively charged latex (polystyrene latex with "Nekal" and a mixed polymer of butadiene with polystyrene and ammonium oleate SKS-30 as stabilizer were investigated. The influence of the latex concentration, the occurrence of a free stabilizer, the sign of the charge of the adsorbed particle and of the sorbent, as well as of the nature of the particle from the disperse phase on the sorption were also investigated. The adsorption of the latex depends not only on the concentration but also to a high degree on the excess stabilizer

Card 1/3

The Adsorption of Polystyrene Latex on Cotton Tissue 156-53-3-14, 52

which hampers the adsorption. In the case of a simultaneous effect of the two factors the adsorption isothermal lines reach a maximum as the sum of two curves which express the effect of the latex concentration (increase in adsorption) and of the excess stabilizer (decrease in adsorption). When a great excess stabilizer is lacking the adsorption isothermal lines take a course characteristic for typical adsorption processes. The adsorption shows the greatest effect for a σ of the latex of 46 to 64-65 erg/cm. When the quantity σ is greater the adsorption increases; however, an unequal adsorption layer results, as the adsorption is accompanied by homocoagulation.

Positively charged latexes are adsorbed by cotton tissue without electrolyte addition, while negatively charged types are adsorbed almost not at all without electrolyte.

The dispersion phase of the latex does not have any noticeable effect on the adsorption; however, it influences considerably the properties of the adsorption layers obtained. There are 5 figures, 2 tables, and 6 references, which are Soviet.

Cont 2/3

SOV, 156-18-4-11, 1957

Adsorption of Polystyrene Latex on Cotton Tissue

ASSOCIATION: **Kafedra** kolloidnoy khimii Moskovskogo khimiko-
tehnologicheskogo instituta im. D. I. Mandel'shteyna
(Chair for Colloidal Chemistry of the Moscow Chemical and
Technological Institute imeni D. I. Mandel'shteyn)

SUBMITTED: October 24, 1957

Card 5/5

RAZUMIKHINA, K.P.

Malignant neoplasms of the eyeball from data of a clinic for eye diseases for a period of nine years. Vest.oft. no.3:60-61 My-Je '62. (MIRA 15:8)

1. Kafedra oftal'mologii (zav. - prof. E.E. Andrezen) I Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova.
(EYE---CANCER)

RAZUMIKHINA, I.P.

Malignant neoplasms of the eyeball from data of a clinic for eye diseases for a period of nine years. Vest.oft. no.3:60-61 My-Je
'62. (MIRA 15:8)

1. Kafedra oftal'mologii (zav. - prof. E.E. Andrezen) I Leningrad-
skogo meditsinskogo instituta imeni akad. I.P. Pavlova.
(EYE---CANCER)

RAZUMIKHINA, N. P.

EXCERPTA MEDICA Sec.12 Vol.11/3 Ophthalmology Mar57

544. RAZUMICHINA N. P. Eye Clin. of 1st Med. Inst., Leningrad. *Meningio-
mas of the optic nerves (Russian text) VESTN.OFTAL. 1955.
34/2 (27-30) Illus. 3

Among 100,000 eye patients, there were only 16 with tumours of the optic nerves;
out of 102 real tumours of the optic nerves there were 16 tumours of the sheath. A
case of meningioma (endothelioma) of the optic nerves is described. After careful
surgical treatment recurrences do not occur as a rule.

(XII,5,16)

RAZUMIKHINA, N.S.; ALEKSANDROVA, Ye.M.

Sorption of polystyrene latexes on cotton paper fibers. Nauch. dokl.
vys. shkoly; khim. i khim. tekhn. no.3:460-464 '58. (MIRA 11:10)

1. Predstavlena kafedroy kolloidnoy khimii Moskovskogo khimiko-
tekhnologicheskogo instituta imeni D.I. Mendeleyeva.
(Styrene) (Sorption)

BAZIMUKHINA, N. S.: Master Chem Sci (diss) -- "The sorption capacity of positively charged polystyrene latexes". Moscow, 1959. 16 pp (Min Higher Educ USSR, Moscow Order of Lenin Chem-Tech Inst im D. I. Mendeleev), 150 copies (KL, No 18, 1959, 121)

ALEXANDROVA, Ye. M.; KIVETSKY, V. N.; NAZUBELAKINA, N. D.

"Concerning Non-Electrolytic Coagulation of Polystyrene Latexes."

report presented at the Section on Colloid Chemistry, VIII Mendeleev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959.
(Koll. Zhur. v. 21, No. 4, pp. 509-511)

RAZUMI KHINA, N.S.

15
17
Adsorption of polystyrene latex as a function of the sign of charge of particles and sorbent. E. M. Aleksandrova and N. S. Razumikhina (D. I. Mendeleev Inst. Chem. Technol. Moscow). *Kolloid. Zhur.* 19, 148-53 (1957); cf. C.A. 50, 4652a. — "Equalizer A" $\{[2,4-(C_6H_5)_2C_6H_3O(CH_2CH_2O)_n-CH_2NMeEt_3](OSO_3PE)$ with n between 3 and 30} (I) and N -(octadecyloxy)pyridinium chloride (II) were adsorbed by neg.-charged paper and C, and polystyrene latex stabilized with I or II also was taken up by these sorbents; this uptake was little intensified by 0.1N NaCl. When the concn. of II in the latex was too high, the latex adsorption was impaired because the adsorbent surface was covered with II. Latex stabilized with II was adsorbed by paper made pos. with sapamine only in the presence of electrolytes. The concn. of I and II in the soln. was detd. from the color intensity after addn. of "Acid Blue K." J. J. Bikerman

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RAZUMIKHINA, N. S.

ALEKSANDROVA, Ye.M.; RAZUMIKHINA, N.S.

Sorption of polystyrene latexes in relation to the sign of the
particle charge and of the sorbent. Koll.zhur. 19 no.2:148-153
Mr-Ap '57. (MLRA 10:5)

1.Khimiko-tekhnologicheskij institut im. D.I. Mendeleyeva, Moskva.
(Latex) (Styrene) (Sorption)

RAZUMIKHINA, N.V.

Results of the conference on new methods and equipment used in
field and laboratory studies of processes taking place in streams.
Vest. IGU 12 no.2:191-192 '57. (MIRA 11:2)
(Hydraulics)

ACC NR: AP6025582 (N) SOURCE CODE: UR/0413/66/000/013/0011/0011

INVENTOR: Sizov, Ye. S.; Sizova, K. G.; Strunin, N. M.; Razumilov, V. D.

ORG: None

TITLE: A die for drawing sheet metal parts. Class 7, No. 183173

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 11

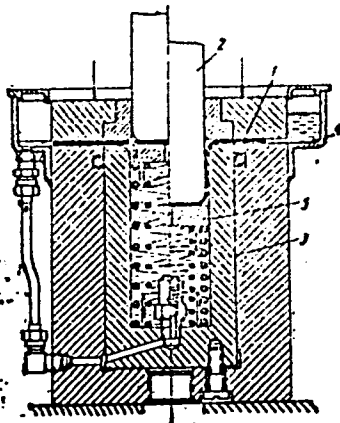
TOPIC TAGS: sheet metal, metal drawing, die

ABSTRACT: This Author's Certificate introduces a die for drawing sheet metal parts by using hydraulic pressure. The unit contains a punch, a fluid-filled female die and a clamping device. The unit is designed for hydrodynamic lubricating conditions and blocking off the section of the blank subject to damage. The die is equipped with an annular reservoir with a bottom flush with the female die surface. A knockout tool is placed in the working area with a diameter greater than that of the finished part. This knockout tool has apertures for transmitting fluid from the female die area to the annular reservoir, which are connected by a pipeline.

UDC; 621.983.32

Card 1/2

ACC NR: AP6025582



1-blank; 2-punch; 3-female die; 4-annular reservoir

SUB CODE: 13/ SUBM DATE: 12Jul63

Ca d 2/2

ACC NR: AP6029013

SOURCE CODE: UR/0413/66/000/014/0013/0014

INVENTOR: Sizov, Ye. S.; Strunin, N. M.; Razumilov, V. D.; Kozlov, I. V.; Sizova, K. G.

ORG: None

TITLE: Double action hydraulic press. Class 7, No. 183709

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 13-14

TOPIC TAGS: hydraulic equipment, hydraulic cylinder, die, metal drawing

ABSTRACT: This Author's Certificate introduces a double action hydraulic press equipped with a hydraulic cylinder control system with distribution valves. These hydraulic cylinders transmit power both to the punch and the clamping jig. The unit is designed for transmitting pulsating movements with a given force and pulsation amplitude to the clamping device to provide deeper drawing. The hydraulic cylinder which transmits power to the clamping device has a hollow piston rod. This rod is mounted on the rod of a piston connected to the punch and is located in a hydraulic cylinder interacting with the distribution valves by means of an electrocontact pressure gauge in the hydraulic system and a terminal circuit breaker rigidly mounted on the press frame. The distribution valves switch fluid delivery between the cavities in the

Card 1/2

UDC; 621.983.32.06; 621.226

ACC NR: AP6029013

hydraulic cylinder above and below the piston. The ratio between the piston areas is calculated to provide pressure for the clamping jig which is several times the punch pressure.

SUB CODE: 13/ SUBM DATE: 25Mar63

Card 2/2

BELOKRINITSKIY, V.S. [Belokrinitskiy, V.S.]; Belokrinitskiy, V.S., N.M.]

Changes in the phagocytic activity of blood leucocytes in experimental hemolytic anemia. Fiziol. zhur. [Ukr.] 11 no.1:123-125 Jan-F '65. (MIRA 18:7)

1. laboratoriya gematologii i leykotsitov; 2. institut perelivaniya krovi i neotlozhnoy khirurgii; 3. laboratoriya fiziologii instituta fiziologii im. Bogomol'tsa AN UkrSSR.

CHERNOMORDIK, A.B.; RAZUMNAYA, V.P.; ZAK, S.I.

Use of antibiotic -resistant colibacterin in intestinal infections. Zdrav. Bel. 9 no.8:9-11 Ag'63 (MIRA 17:3)

1. Iz otdela antibiotikov (zav. - doktor biolog. nauk A.B. Chernomordik) Kiyevskogo instituta epidemiologii i mikrobiologii.

RAZUMNAYA

E. G.

Genesis of the wulfenites of Southern Dardana (modern Tadzhikistan). R. M. Vainshteyn and E. G. Razumnaya. *Soviet Geol.* 8, No. 5, 11 (1968). English, 41 (1968).--In a zone consisting chiefly of galena, pyrite, zinc blende and chalcocopyrite, subsequent deposition from the ground waters along the fracture porphyries gave first anglesite, which in the oxidized zone was converted to cerussite, and then to wulfenite. Small amounts of V minerals accompany the wulfenite. While the primary galena, zinc blende and chalcocopyrite are free from Mo and V, the surrounding limestones contain some of both.

F. H. Rathmann

AND SEA METEOROLOGICAL LITERATURE CLASSIFICATION

CA

Cathode-tube microscope and quantitative luminescence analysis: G. P. Komovskii and E. G. Razumnaya. Soviet Geol. 8, No. 11, 111-17(1938).—The Komovskii instrument is used for a quant. detn. of the compo. of minerals on the basis of the luminescence of the components. Comparison with chem. data gives good agreement. F. H. Rathmann

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

21(4)

PHASE I BOOK EXPLOITATION

SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd,
Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally.
(Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow,
Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies
printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician,
V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and
A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V.
Pereverzev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and
biologists working in the production and peaceful application of atomic
energy; for professors and students of schools of
higher technical education where the subject is taught; and for people
interested in atomic science and technology.

Card 1/11

Reports of Soviet Scientists (Cont.)

SOV/2714

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by G.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

TABLE OF CONTENTS:

PART I.

Shcherbina, V. V. Geochemistry of Uranium in the Oxidation Zone of Ore Deposits on the Basis of Experimental Study Data Report No. 2066

Card 2/11

Reports of Soviet Scientists (Cont.)

SOV/2714

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